ENVIRONMENTAL SCANNING

What it is and how to do it…

A step by step guide to setting up and running an environmental scanning process in your organisation

Maree Conway
Thinking Futures

Environmental Scanning:

What it is, how to do it…

Table of Contents

Acknowledgements

My approach to environmental scanning is informed by my work in the then Foresight and Planning Unit at Swinburne University of Technology from 1999-2005, where I collaborated with Dr Joseph Voros (now in the Australian Graduate School of Entrepreneurship at Swinburne), and Marcus Barber (now running Looking Up, Feeling Good).

Since then, my affiliation with Shaping Tomorrow (http://www.shapingtomorrow.com/) and my professional practice with my clients has helped to structure the identification, recording and reporting of useful and relevant scanning hits and trends. Direct contributions from my colleagues are cited throughout the guide.

Preface

This guide is designed to provide you with enough information to understand the critical steps you need to follow to set up an effective environmental scanning program in your organisation.

Environmental scanning in a strategic sense is about building a global context for your work, your organisation, your competitive environment and your industry. It is about recognising that the future is unlikely to be anything like the past, and that we therefore need to spend some time understanding the trends and likely influencers on the future of our organisations. High quality scanning is the core of effective futures work.

I have put this guide together to assist people who want to move to the next level of strategy development – beyond formulaic strategic planning. It is based on what I wished I had known when I was asked to integrate futures work into the planning framework at an Australian university in 1999. I had to look up 'foresight' on google to find out what I was dealing with, and I'm hoping this guide will save you that step in your futures journey!

These guidelines will help you start scanning, but this is not a 'complete' document on 'how to do scanning'. The guidelines have a practical focus, providing enough information to allow you to be comfortable to start scanning. There are some references included if you want to read more of the detail and the theory behind environmental scanning.

Ultimately, however, scanning is a personal act, even when undertaken in an organisational environment. It is a skill that can be learned but what you do with your findings will depend very much on your own context.

The guide is deliberately not written in a formal or scholarly style. As a practitioner, it is important that the steps in this guide do help you to set up a scanning program in your organisation. Please let me know if I achieved that aim, and if you have any suggestions for improvement.

Maree Conway

Email: maree.conway@thinkingfutures.net

Terminology

Like any field, futures has its own jargon. There are levels of depth in futures work, and the jargon increases in complexity and abstractness as you increase the depth.

There is also some confusion about the terms 'futures' and 'foresight'; they are often used interchangeably.

Foresight is defined as the capacity to think systematically about the future to inform decision making today. It is a capacity that we need to develop as individuals, as organisations, and as a society. In individuals, it is usually an unconscious capacity and needs to be surfaced to be used to inform decision making.

Futures is a term that can be used to refer to the broad academic and professional field now developing globally, as well as research, methods and tools that are available to us to use to develop a futures capacity.

Some general futures terms you might come across are:

- **Strategic Foresight**: an organisational futures capacity,
- **Futurists**: those who work in futures, as academics, consultants (outside organisations) and as practitioners within organisations, and
- **Futures Approaches**: the tools, methods and thinking styles used to build an organisational foresight capacity, usually interdisciplinary and inclusive rather than restricted to a particular method or philosophy.

Some relevant scanning terms are:

- **Event**: something happening in the internal or external organisational environment which can be observed and tracked, usually documented in a scanning 'hit',
- **Trend**: a grouping of similar or related events that tends to move in a given direction, increasing or decreasing in strength of frequency of observation; usually suggests a pattern of change in a particular area (for example, consumer behaviour, technology use); trend is of importance to the scanner,
- **Driver of change**: a force moving trends in certain directions, broad in scope and long term in nature (for example, globalisation); drivers of change usually cause either direct or indirect change of some sort in the environment in which they are operating, and
- **Worldview**: how you see the world and make meaning of what you see; also influences what you ignore or don't see when you are scanning.

Using this Guide

The guide is designed to be read sequentially so that you build up your understanding of environmental scanning which will, in turn, increase your chances of implementing a successful scanning program in your organisation.

You can, of course, dip in an out as you wish, but I would recommend working through the guide from beginning to end the first time you read it.

Part 1 deals with what you need to do to set up your environmental scanning process – what scanning is, what it aims to achieve, where it fits in the strategy development cycle, understanding worldviews and some steps for getting started.

Part 2 deals with the scanning process, where to look for trends and how to assess their usefulness – what to look for, where to look, knowing when a scanning hit is useful, recording your hits and the challenges you might face.

Part 3 deals with classifying and assessing your trends, and reporting the output of your scanning process – interpreting trends, reporting your findings and maintaining your scanning over time.

PART

1

Setting up your Environmental Scanning System

What is Environmental Scanning?

Environmental scanning is the art of ***systematically*** exploring the external environment to:

(i) better understand the nature and pace of change in that environment, and
(ii) identify potential opportunities, challenges and likely future developments relevant to your organisation.

Environmental scanning explores both new, strange and weird ideas, as well as persistent challenges and trends today.
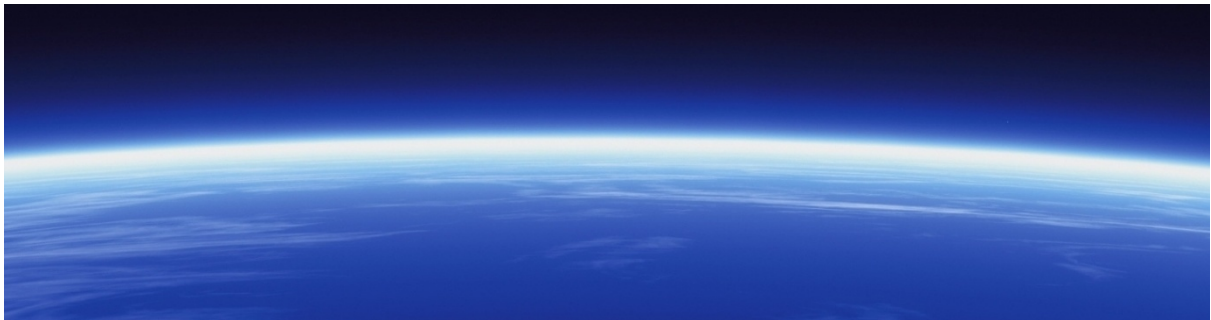
Environmental scanning is what Choo (1998) calls formal searching, using formal methodologies for obtaining information for a specific purpose. It is **systematic**. It is much more than reading newspapers or industry journals, or checking the latest statistics about your market. It is about exploring both present certainty and future uncertainty, and moving beyond what we accept as valid ways of doing things today.

Most people in management positions in organisations would say that they scan the environment, and indeed, nearly all of us are doing some form of scanning in our personal and professional lives every day – whether we realise it or not.

For strategy purposes, however, environmental scanning needs to be **formal and systematic**, and **focused** around a particular interest or critical decision being faced by the organisation. It is an activity usually undertaken as part of a broader strategy development process.

Without a structured approach to scanning, you will just be aimlessly scanning the web, and luck will be the only determinant of whether or not you find something useful.

Aim of Environmental Scanning

The aim of environmental scanning is to identify relevant information for your organisation, both trends and weak signals of change appearing on the horizon, in order to broaden and deepen thinking about strategic options.

It is about ensuring that there are no surprises in the future operating environment for your organisation – that is, avoiding organisational myopia.

Scanning is of most value when it is focused or anchored around issues of current concern to your organisation. Alternatively, there may be a fork-in-the-road decision that needs to be made in the near future, and you need to get more information about the likely implications of your options before you make a decision.

At the end of the scanning process, you are aiming to have a report that details relevant trends in the external environment that are likely to have a significant impact on the way you do business in the future, and the implications of those trends on your organisation's strategy today. Reporting is covered in Part 3 of the guide, and needs to engender a sense of urgency about addressing the trends you have identified.

Scanning should aim to provide information to inform the development of flexible strategy that readies your organisation to respond quickly to the changing environment rather than react to it. As one step in a broader strategy development process, scanning helps organisations to create their preferred future, rather than end up as an extra in someone else's future.

Where Environmental Scanning Fits in the Strategy Development Process

Environmental scanning, as a futures method, informs the *strategic thinking* stage of strategy development. Figure 1 shows strategy development and implementation as a four stage process, each requiring its own methods and approaches.
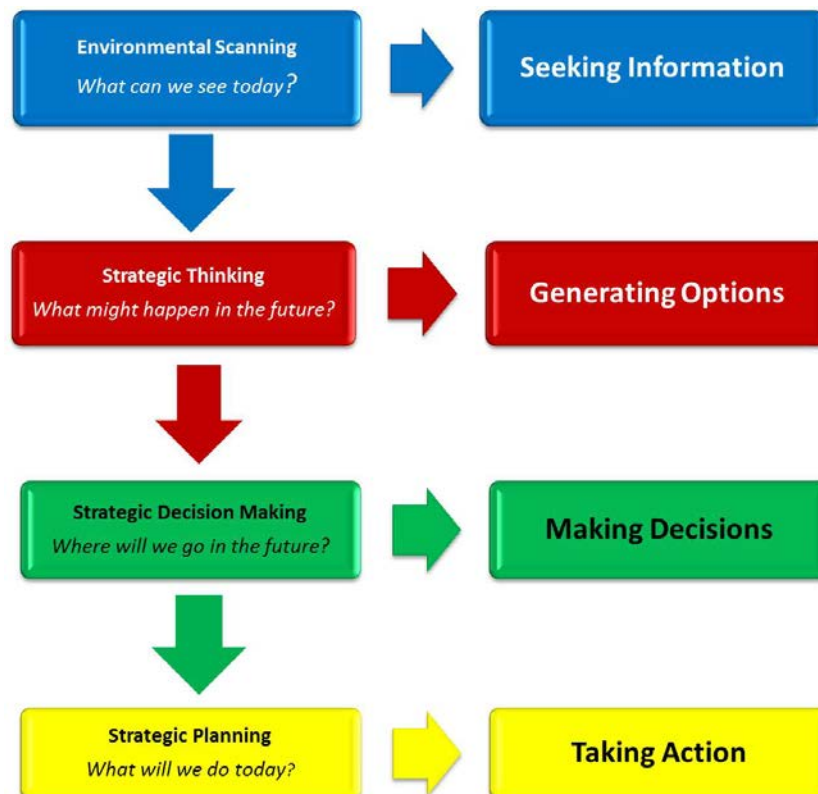
Figure 1: Strategy Development Process

Futures approaches and methods inform the strategic thinking stage and are typically made up of several activities which generally cover:

- **Input**: *asks what is happening? -* gathering information about the external and internal environment,
- **Analysis**: *asks what seems to be happening? -* determining a framework to consolidate your information and to facilitate identification of trends and other patterns of change,
- **Interpretation**: *asks what's really happening? -* working out how the information applies to your organisation, what is meaningful and what is not, and
- **Prospection**: *asks what might happen? -* explores future uncertainties to consider multiple, plausible alternative futures for your organisation, in order to expand the scope of your strategic options.

This process, core questions at each stage, and its connection to strategy outputs is shown in Figure 2 – the Generic Foresight Process, developed by Dr Joseph Voros in the then Foresight, Planning and Review unit at Swinburne University of Technology.

Copyright © 2000 Joseph Voros
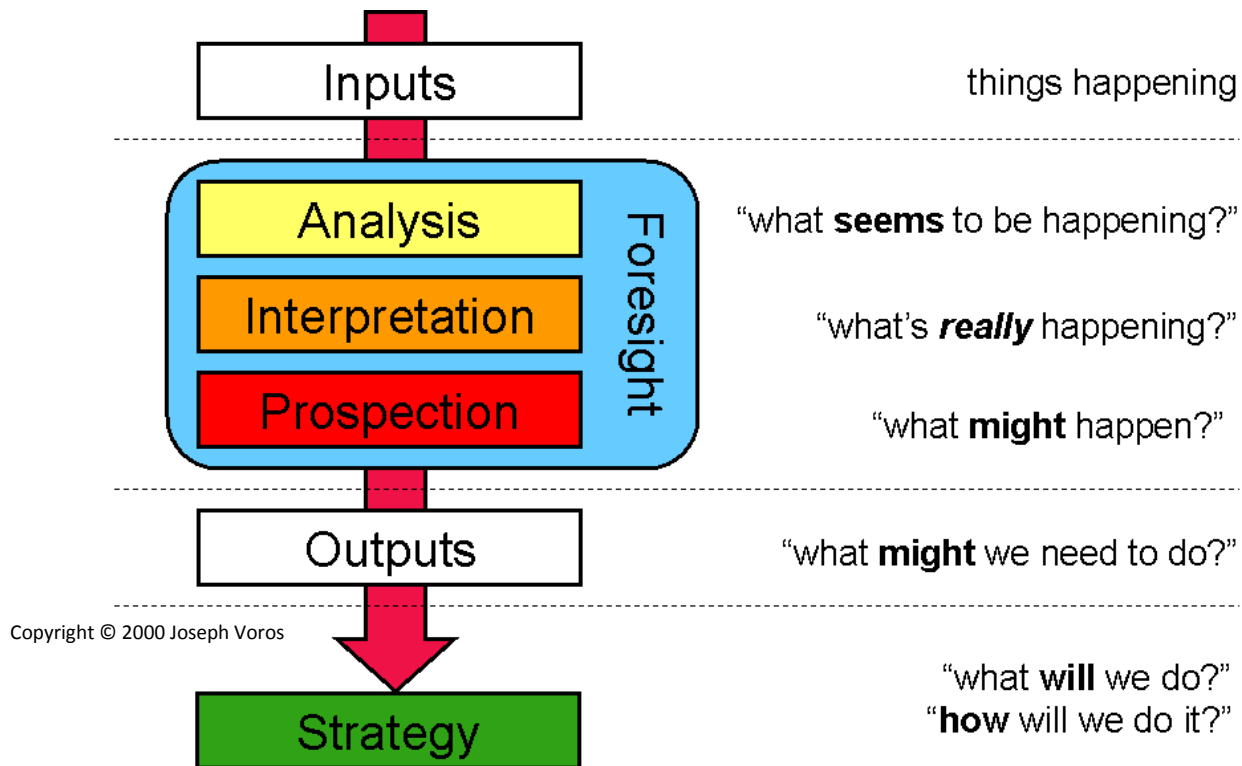
Figure 2: Generic Foresight Process

Environmental scanning belongs to the Inputs stage – it gathers information about what is happening in an organisation's internal and external environments to inform strategy development.

In a futures sense, scanning is the starting point of a strategy development process which is differentiated by the Prospection stage, where the scanning output is used to explore alternative futures – rather than develop a linear strategy from what is happening today that implicitly assumes the future will be the same as the present.

Most organisations scan in some way, most have some way of analysing their data/information and most will spend some time thinking about what it means. Adding in the Prospection step, however, allows organisations to explore longer term possibilities and to prepare for future uncertainty now.

As well as my own Getting Started Guide, there are two excellent guides that step you through these processes and help you to 'do foresight' work:

- Thinking About the Future: Guidelines for Strategic Foresight by Andy Hines and Peter Bishop (published by Social Technologies, 2006), and
- Shaping Tomorrow's free online practical foresight guide.

An Integral Framework

Using an integral framework[1] to design your environmental scanning system identifies four critical aspects to include:

- **Staff**: individual worldviews and perceptions, values and beliefs, both of the scanner and staff in an organisation,
- **Culture** : designing a system to fit your organisation's culture,
- **Processes**: understanding where your system 'fits' in existing planning and strategy processes and who needs to be involved in those processes, and
- **External Environment**: trends, drivers of change and emerging issue in local and global contexts.

Most organisations spend a fair bit of time in designing strategy projects that 'fit' their culture and internal ways of doing things. There are also many publications that suggest a myriad of ways to design strategic planning processes. Remember though, that all these models will require customisation for your organisation. This guide won't spend much time in this space, since you will know best what will work and what won't in terms of setting up a scanning system in your organisation.

How staff are involved in strategy projects varies across organisations. Some seek views at the beginning of a project in a range of ways, while others provide staff with a draft plan and ask for comments. Opening up the process to provide staff with opportunities to participate in authentic ways (that is, in ways that will be taken into account in the thinking that occurs to identify options) strengthens strategy development and helps to ensure alignment and effective implementation. Staff have the power, whether conscious or unconscious, to implement or undermine strategy, so it makes sense to include them in the process from the beginning.

Understanding staff views about the future of your organisation can be achieved by a simple online survey, asking a few questions such as:

- What do you think will be a good future for your organisation?
- What would be a bad future? What one thing you could do today would help stop the bad future from happening?
- What are the three major trends that will have a significant impact on your work over the next 10 years?
- What is the most critical decision your organisation has to made in the next one to two years?

---

[1] Integral approaches are based on the work of Ken Wilber and provide a 'big picture' view of a project, identifying all key elements that must be included if understanding of issues is to be more than superficial. Most importantly, this approach requires the inclusion of staff views as a critical element in strategy development. More information on http://www.kenwilber.com, and http://thinkingfutures.net/integral-futures.

This process is essentially an internal scan of your organisation, and complements what you already know about organisational processes and culture. The analysis of this data is critical, and requires someone who can synthesise a large amount of qualitative data and prepare a report that identifies common patterns, themes and issues of concern to staff.

Never underestimate the power of the online survey as a scanning tool, and never underestimate your staff – the quality of responses is usually high and provides some clear indications of what matters to staff. This provides you with signals about what you need to pay attention to in your strategy development process to help ensure its successful implementation.[2] (Of course, what matters to staff may not necessarily be a critical issue for your strategy exercise, but explore and address these concerns before dismissing them).

Remember that strategy without people is strategy without a future.

These guidelines focus on how to scan the external environment, within the broader integral framework.

---

[2] Thinking Futures includes online staff surveys as part of all client projects, and manages the process from design, administration, analysis and report writing. Contact Thinking Futures for more information.

A Word about Worldviews

The value of an integral approach to scanning is that it draws attention to the intangible qualities that help determine what is scanned and what is not.

Before you start scanning, you need to reflect on your worldview – how you create meaning from your experience of the world, how you filter events, what you accept to 'real' and what you dismiss as irrelevant or rubbish.

Our minds are wonderful things, but they are habitual things as well. They look for patterns, and they tend to ignore things that don't fit the pattern. They simply miss things because they do not see them.

There are no future facts, and when confronted with uncertainty and the unknowable that characterises the future, your minds tend to retreat to explanations based on what is already known.

They use your existing benchmarks of what you believe to be right and wrong, how things work, what is real and what is not. They shut down when something new doesn't match expected patterns. They miss things that might just be important, and make assumptions that often are just wrong. They fall into a certainty trap that does you no favours when you are scanning.

So, when scanning, you will be making a subjective assessment of the value of what you are finding. You need to be wary of allowing your minds to retreat to explanations and assessments based on what is already known. You need to ensure that your mind doesn't shut down when something new doesn't match expected patterns.

If you are not alert to your worldview when scanning, you will miss things that just might be important, and you will make assumptions that may be just plain wrong.

Scanning is not about being certain, but rather about being comfortable with uncertainty, ambiguity and complexity. Being certain is not an asset when you are scanning.

It is about moving beyond traditional and familiar sources and thinking in new ways about existing and potential markets, emerging technologies and new business models. It is about looking beyond current ways of working and thinking the unthinkable to see what might be needed in the future. In short, scanning requires you to:

- have an open mind about what might be important,
- continually test your assumptions about why you think something is valuable or not, and
- dismiss nothing until tested (particularly if you think it's rubbish).

Getting Started

Setting up an environmental scanning system is like any project – it requires some planning before you 'go live' to ensure that the process is accepted internally and that you get the outcomes you need.

This section assumes you haven't had a formal scanning process in place previously, but will provide a useful review tool if you already do scanning. If you have not done scanning before, then a good way to introduce scanning to your organisation is to begin with a scanning project that is linked directly with your planning process.

Consider the following points as you set up your environmental scanning system.

Organisational commitment is important. Do you have the support of your target audience and/or your manager to undertake the scanning? If not, is this important? If it is, you need to seek this support – at least in principle – before you begin.[3]

Be clear about where scanning 'fits' into your planning processes. You can do one-off scans on particular issues, but this guide is focused on setting up a scanning process for the long term – that is, on a continuing basis. This longer term approach allows you to build capacity over time so that the 'one off' scans can be dealt with as part of the existing system. Ultimately, you want a system that will allow staff to tap into the information you are finding to build their own scans when they need them.

Understand for whom you are scanning. This is important so that your reporting meets their needs. What sorts of reports do they 'like' – in-depth, bullet points, two pages maximum? What would a successful report look like (content, format, length)? Some suggestions for focus and format are made in Part 3. Consider this **before** you start scanning.

Establish a diverse planning team. The exact number will depend on your needs and the size of your organisation. Be representative as far as possible, and aim to include people who can think outside the box (ie can lift their sights above day-to-day work).

Including 'outliers' can be useful since they usually have a different (and sometimes eccentric) view on issues. You need this if you are to be able to challenge assumptions about why your organisation does the things it does today. The key criterion for selecting your scanning team is diversity across roles and perspectives. The composition of your team may change over time, or it may stay relatively stable. It depends on your organisation's needs, and why you are scanning.

A useful reference here is "An audit for organizational futurists: 10 questions every organisational futurists should be able to answer" (Foresight, 5 (1), 2003: 20-33) by Andy Hines. Question 5 is "Know thy audience", and its principles are very relevant to selecting your scanning team.

---

[3] Contact Thinking Futures for assistance here about the types of arguments and reasoning that might appeal to different audiences. A simple question is always : what's in it for them?

Identify the major questions facing your organisation today. Ask yourself what is changing and having an impact on the way you work. Why is this important? Often, current strategy will provide a starting point here since it will have identified a preferred future for your organisation – ask what is likely to influence how and when you might achieve that future? What do you need to know more about? Spend some time thinking about this to identify what is really uncertain. These uncertainties will help you identify your **scanning 'anchor'**, and identify some areas on which to focus your scanning.

Identify the time frame for your scanning. To be successful, environmental scanning must scan well beyond today. Aim at least 5-10 years out, but don't be afraid to go out further. You are aiming to provide a long term context for your continuing strategy development so that you don't have to 'reinvent the wheel' every time you update your plan.

Consider your scanning frame (see Part 2). What are you going to scan for and where are you not going to scan? Take care here, and make sure you understand why you are choosing not to scan around particular issues and geographies. Don't narrow your scope immediately so that you miss those emerging issues. And, remember that your worldview influences what you think is valuable scanning and what is not. Keep an open mind.

Hold a briefing meeting for your scanning team to discuss:

- the scanning process and timelines and capabilities need to scan effectively,
- their views about issues, questions and keywords to focus the scanning,
- timeframe for their scanning,
- responsibilities and expectations,
- recording and assessing scanning 'hits', and
- reporting format.

Start to scan.
Remember that it is vital that you know that when you scan it is both okay and necessary to look outside the box. This means that as well as identifying trends and issues that are topical and relevant today, you should also be looking far and wide for signals about how those issues might play out into the future, and what new issues are emerging that you need to consider. You need to be curious.

For example, if there is a government report on skill shortages that is an operational imperative today, identify the drivers of this imperative, and then explore how those drivers might evolve over time. Think about what challenges might emerge, and what decisions your organisation might have to make to address those challenges. Will it always be an issue, or might it shift or disappear?

This is one time when following links on the internet to see where you end up is a good thing.

PART

2

Doing Environmental Scanning

What to Look For: Focusing your Scan

You are looking for data that relate to your scanning anchor (the key issue or issues around which you are scanning) – that is, not about what you do on a day-to-day basis, but what you need to consider BEFORE you define your future strategy and write your strategic plan.

This is not as easy as it sounds. We are so preoccupied with the short term, here and now, and the urgent that switching our brains over a long term and more strategic focus takes time and space. You might need to have a few scanning sessions that seem confused and worthless before you start to identify the valuable information, and to filter out the 'noise'.

You will need to move out from your organisation, into and beyond your industry to global trends. You will need to take a systems perspective. You will be looking for information about:

- your industry (education) and its operating environment,
- your services, and how they might evolve,
- your clients, and how their expectations might change,
- issues that are likely to affect your workforce and your staff,
- emerging and converging technologies, and
- emerging shifts in what we think is 'business as usual'.

Figure 3 shows the scope of scanning – this is set up for an educational institution and shows the types of trends that might be relevant. Note also that wildcards are included in the scanning process (see page 17).
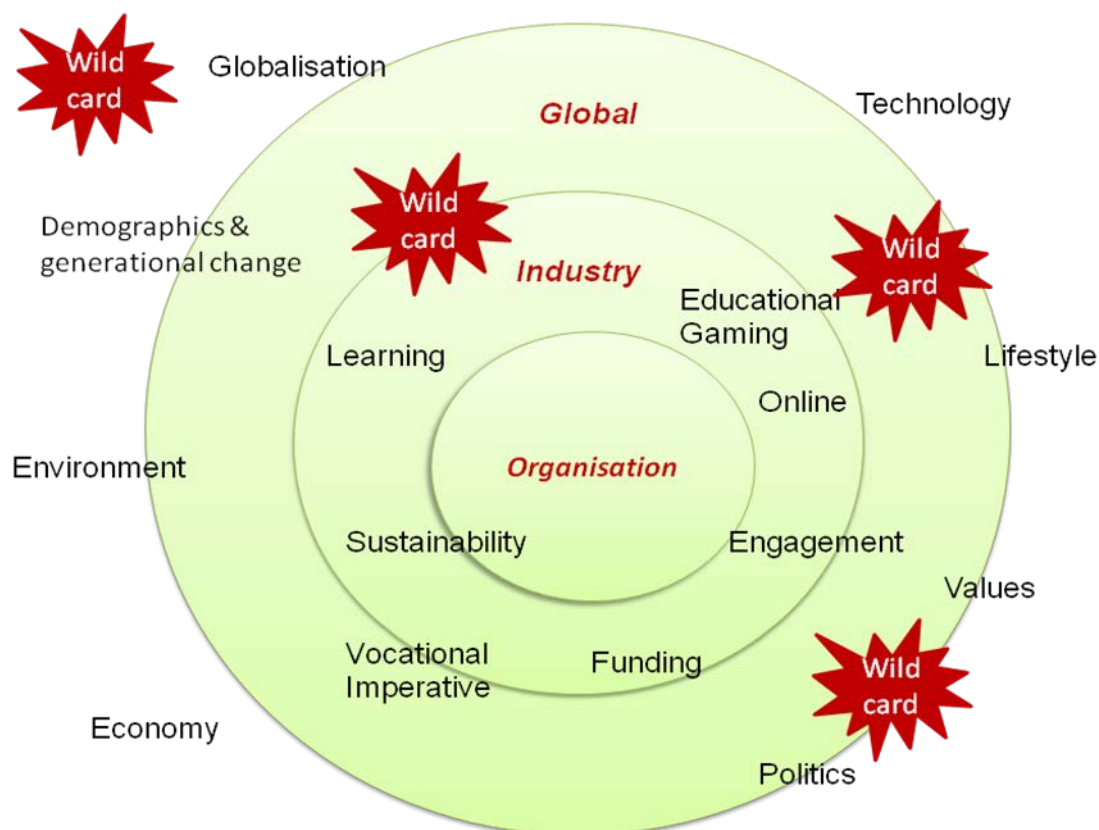

Figure 3: Scanning Scope

Using a framework such as STEEP (Social, Technology, Economy, Environment, Politics) or PESTLE (Politics, Economics, Social, Technological, Legal, Environment) provides you with a starting point for your scanning. If for example, your scanning anchor is around technology and learning, you will need to search out hits related to different aspects of the issue – delivery, communication, networking etc.

Table 1 provides some broad trend areas to explore using the STEEP framework. The table is not exhaustive, and needs to be adapted by each organisation, but it will get you started.

Table 1: Broad Trend Areas

STEEP FACTOR	EXAMPLES OF AREAS FOR SCANNING
Social	Demographics, population shifts, migration, generations Standards of living Value systems Socio-economic conditions Education (although you might want to make this a separate classification) Ethic/religious factors Crime, safety and security Family Health Attitudes to work and employment Leisure Lifestyle changes Consumer attitudes and opinions Fads and Fashions
Technology	Technology for service delivery Technological developments generally, including emerging technologies Convergence, competition and dependencies Nanotechnology Information and communications Technology legislation
Economy	All aspects of economic activity, global, national or organisations. Work and employment, occupations Consumer behaviour Globalisation
Environmental	All natural factors Physical and geographical conditions Ecosystems Resources Sustainability
Politics	Often includes legal issues. Global connections National factors

Adapted from : Global Business Network, Zpunkt Trenddatabase, www.z-punkt.de and Pitney Bowes, Environmental Scanning Eyechart

Where to Look: Sources

You can scan across a wide range of sources (summarised by Shaping Tomorrow – http://www.shapingtomorrow.com):

"newspapers, websites, blogs, wikis, library databases, podcasts, videos, news sites, newsletters, magazines, books, book reviews, presentations, reports, surveys, interviews, seminars, chat rooms, trend observers, advertisers, philosophers, sociologists, management gurus, consultants, researchers, experts, university research reports and sites".

Consider also think tanks, the work of futurists, universities (current research publications) and professional journals, and also consider the work of artists and writers (eg science fiction). The aim here is not to find an accurate prediction of the future but to help you work out what questions to ask.

Some meta-scanning sites (sites that have already done the initial scanning for you) are:
Trendwatching http://www.trendwatching.com
Future Scanner http://www.memebox.com/futurescanner
Brain Reserve http://www.faithpopcorn.com
Shaping Tomorrow http://www.shapingtomorrow.com
Now and Next http://www.nowandnext.com
The Tomorrow Project http://www.tomorrowproject.net
Seven Revolutions:http://gsi.csis.org/index.php?option=com_content&task=view&id=19&Itemid=48
SRIC-BI www.sric-bi.com
Arlington Institute (wildcards) www.arlingtoninstitute.org
UK Government Foresight Horizon Scanning Centre (UK focused but good)
http://www.foresight.gov.uk/Horizon%20Scanning%20Centre/index.asp

Some sites for undirected (having a look) viewing[4] are:
Wired News: http://www.wired.com
Yahoo! – Futures Studies: http://dir.yahoo.com/Social_Science/Futures_Studies
Google Directory – Future: http://directory.google.com/Top/Society/Future
Plausible Futures Newsletter: http://plausible,custompublish.com
Futurelog – Overmorgen: http://www.overmorgen.com
Futurescan: http://futurescan.blogsport.com

Some wacky and alternative sources are:
The Utne Reader: http://www.utne.com and http://www.utne.com/interact/links.html
AlterNet: http://www.alternet.org
Disinformation: http://www.disinfo.com
The Edge: http://www.edge.org

Look for outliers and don't be afraid of the weird and the whacky. Remember that what seems unreasonable today may well not be viewed that way in the future.

---

[4] Thanks to Dr Joseph Voros for providing these links.

Knowing When a Scanning Hit is Useful

When you scan, you will locate 'hits' which describe, for example, events, innovations, policy shifts, social developments and changes in the way people use technology. As you scan more, similarities across 'hits' will allow you to cluster them into a trend.

Figure 4 shows the life cycle of a trend. By the time you have identified a trend, it is likely to be already affecting your business. Emerging issues, on the other hand, are the signals that are just beginning to appear on the horizon. These emerging issues might turn out to be irrelevant for your organisation, but they can also turn out to be a significant issue that you need to consider. The only way to make this determination is to monitor the emergence via scanning.
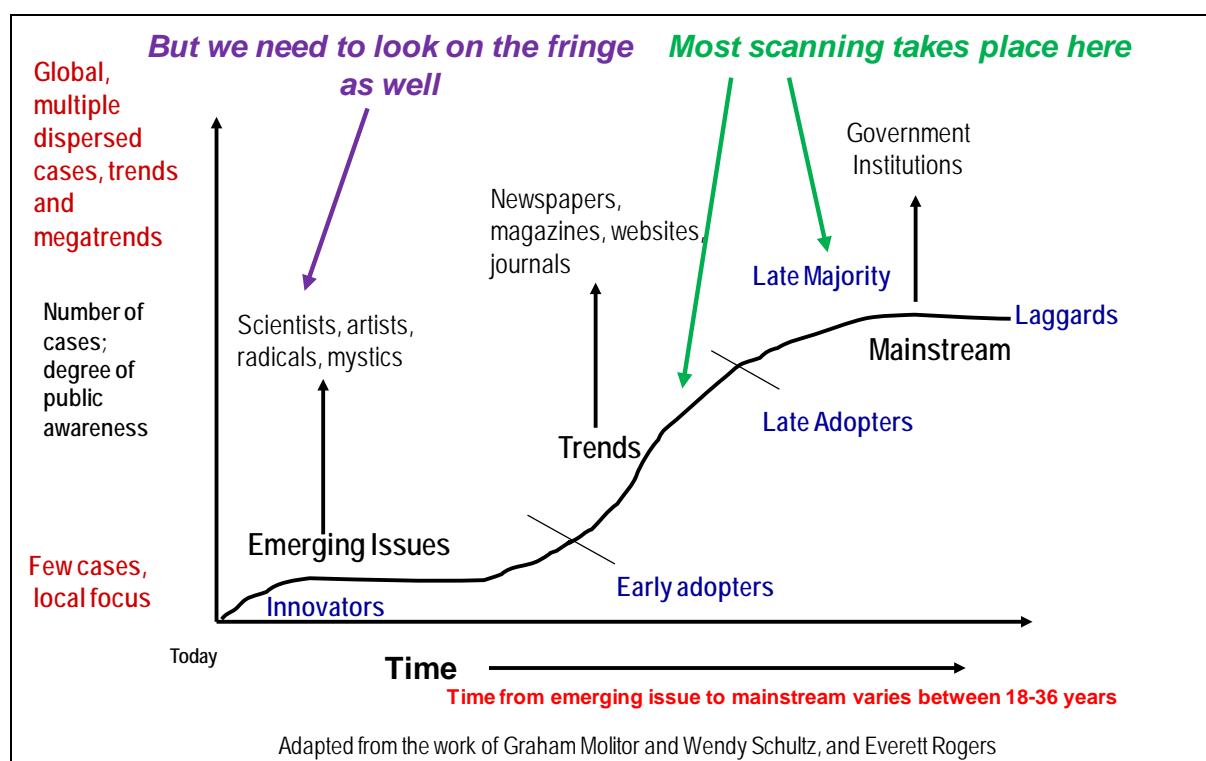
Figure 4: Life Cycle of a Trend

Identifying **trends** is relatively simple, mainly because they are labelled as such, and there is much information about them (eg technological and demographic trends, generational issues). It is also likely that the impact of trends is already being felt in the present, so scanning is about better understanding how that trend might evolve over time.

Identifying an **emerging issue** is more difficult. Emerging issues start with a value shift, or a change in how an issue is viewed. An opinion leader or champion inevitably emerges who begins to move the issue into the public view. It is at this time that you will be able to identify the emerging issue. You might be looking at 'experts' who are opinion leaders, or you might be looking at more fringe sources such as those found in youth culture and social movements.

You will need to make an assessment about whether or not the scanning hit is useful to your organisation. Some tips to help you identify relevant trends and emerging issues are:

- explore what the trend/emerging issue is doing today.
- explore what people are saying the trend/emerging issue will do over time,
- explore the potential impact of the trend/emerging issue in your industry today and in the future, and/or
- place the trend in a global context and consider its implications for your organisation today and into the future.

If you find something that might be useful:

- test it by searching for relevant keywords to see what sort of links appear; if you get a lot of hits and the quality of the hits seem high, it means the issue is being talked about by many people and it is something you should include as a scanning hit,

- or test it with your scanning team, or others in the organisation – does it seem important to them?, or

- if you think it's only the weird and wacky, put the hit on a watch list, to see if it appears on your scanning radar again (three radar hits of substance means it's probably something worth reporting).

If you have a reaction along the lines of 'this is rubbish' or 'this will never happen', explore a bit further before dismissing what you have found as irrelevant. What else might happen that would make this emerging issue more likely? If nothing substantial comes from this further exploration, then you can probably safely leave that particular hit for now (although check it out every now and then – keep it on a watch list).

Does it matter?

Shaping Tomorrow (ST) (http://www.shapingtomorrow.com) has identified the following questions (slightly adapted here) to ask when assessing the usefulness of a scanning hit:

- does the hit aim to identify and assess possible future threats and opportunities, including radical alternatives,
- does the hit explore trends and their potential impacts?
- does the hit challenge existing assumptions underpinning current polices and practice?

ST also suggests that a good 'hit' has the following attributes:

- credible and eclectic sources across disciplines,
- easy to read/plain language,
- thought provoking,
- future focused (except where history is needed to give context and insight into the future),
- helpful for creation of futures plans and action.

Determining the value of a 'hit' depends both on your personal insight and your ability to mentally move into a future space. Determine relevance only after you have explored the trend in the present AND in the future.

A trend's trajectory today could shift quite radically in the not too far distant future. One aim of scanning is to help your organisation avoid surprises, and unless you explore how a trend might play out over time, you are likely to be surprised (see Part 3 for more on interpreting trends).

Take a 'big picture' view today and a 'long picture' future view of your trend.

Counter Trends and Wildcards

As well as looking for trends and emerging issues, you should also be alert for counter trends and wildcards.

As you identify a trend, ask what the counter trend might be (the opposite trend). Do some scanning to see if such a counter trend is obvious – it might be, it might not be. If you find some evidence of a counter trend, record that. Counter trends can derail a trend's future trajectory, and you need to be alert to alternative outcomes if a counter trend gets stronger over time.

Wildcards are low probability, high impact events that have the potential to change the world overnight. Some sources like the Arlington Institution (http://www.arlingtoninstitute.org) explore wildcards , and identifying their potential impact has a lot to do with your ability to ask 'what if' questions around trends that might seem highly improbable today. Integrating wildcards into your strategic thinking requires an open mind.

You may not find any counter trends or wildcards, but stay alert for them. They will often be weird and wacky, and you will be tempted to dismiss them as irrelevant. **Explore first before you dismiss.**

Because wildcards in particular are often a bit improbable, you will need to resist the voice in your head that tells you that you that it will never have an impact on your work. You will be tempted to ignore it because it seems unlikely to ever help you get your work done today or tomorrow. But, strategy is about the future, not the short term "tomorrows". Use the wildcard to explore questions like "if this did happen, what opportunities or challenges would our organisation face?"

Recording your Scanning Hits

When you start to record your scanning hits, you are working at the **analysis** stage of the Generic Foresight Process (Figure 2). You are working out how to present your scanning hits in ways that will make sense to your organisation.

Depending on the scope of your scanning, you can manage the recording process manually, or you can set up a database online or locally to manage your hits. Either way, it's probably a good idea to have one or two people whose job it is to coordinate receipt of the scanning hits from all scanners. This will allow some consistency to emerge in how the hits are recorded and summarised.[5]

When you identify a hit that you wish to record, ensure you capture the following:

- a reference number (optional, depends on the size of your database),
- a title for the scanning hit,
- the source where you located the hit, and the date it was published,
- a brief summary of what it is all about,
- classification (use STEEP, keywords, or a classification system agreed within your organisation) – this might be incorporated into your reference number.

For example (taken from SCAN, a publication by SRI Business Intelligence):

2009-01-03 Streaming Video and Security (Information Week Daily 26 November 2001), describes the shift of Packet Video (a developer of video streaming technology) from consumer to security applications. The company's technology could provide live feeds from the cockpits of hijacked planes.

Once a week, collate your hits, and clusters of like hits will begin to emerge. At this stage, you are starting to identify trends. Share the weekly report among the scanning team and get their feedback on what is important to explore more deeply. You might share via email or you might have a meeting – whatever works for your organisation.

Over time, your preliminary clusters of scanning hits will become stronger and you will recognise common or similar patterns of change. At this stage, you probably have a trend, and you will be able to write a short summary statement about that trend, so that people will understand its importance to your organisation. Questions about the trend's implications for your organisation will also probably start to emerge at this stage – keep a note of these questions as they will be useful at the reporting stage. You may also start to see connections (both positive and negative) among trends. Keep of a record of them as well, as they will be useful 'conversation starters' further along the strategy development process (See Part 3).

---

[5] Shaping Tomorrow offer a free online service to record your 'insights' or scanning hits on their site. This saves you the trouble of setting up your own system, and you can choose whether to keep your Hits private or share them with other users.

Challenges You Might Face

Information Overload

There is a lot of information out there. How do you deal with it so you don't go into information overload?

You will be faced with an overwhelming amount of information when you start out. Remember your scanning anchor, but follow-up leads that look as those they might be useful.

Look for credible sources – you will soon learn how to identify these. Trusting your expertise and insight about what is credible and what is not is essential.

Over time, you will be able to determine pretty quickly what is important and what is not.

Stretching your Thinking (or my brain hurts!)

It will probably be necessary to re-train your brain to shift the patterns of the past to be more open to what you are seeing as you scan, and to shift from an operational to a strategic focus. Your brain will probably start to hurt!

You will be dealing with complexity and uncertainty. What you think is impossible now just might be plausible in the future, and this challenges – in a big way - what you believe to be true about the world.

That is a truly uncomfortable process, so expect some 'cognitive dissonance'.

If you brain doesn't hurt, you are probably not stretching you thinking enough! Scanning becomes easier over time. If you scan regularly, you will become an 'unconsciously competent' scanner.

Time

You will also face the VERY REAL challenge of making enough time available to do your scanning.

Scanning takes time.

Let me repeat that – scanning takes time.

You need to scan on a regular basis, for a set period of time. Start with 30 minutes every couple of days, and then adjust your time allocation as you get more comfortable with the process.

Eventually, you will be scanning all the time, whether you know it or not, so make sure you have a way of easily recording any hits you find for further exploration. The key is to set a schedule for scanning and not change it.

If you work in a front-line position where you see clients, time for scanning will always be at risk. Usually however, you will be scanning for a specific purpose, that is time limited. Work with your manager and colleagues to ensure you are able to move out of the front-line for dedicated scanning time.

If you are managing a scanning process, commit to making the time available for your staff to do their scanning. Ensure they know that scanning is work too, and that you support them spending time on this strategic activity. Encourage them to allocate set times for scanning, and to not be distracted by the urgent work that is sitting on their desk. Allow them to work at home or in the local café if that is possible (ie out of the office), so that they can focus very clearly on scanning.

This is about balancing a strategic activity with your operational imperatives. Most of us spend most of our time in the operational arena, and feel guilty when we move out of that space to focus on other things. Not keeping up with the volume of work and making ourselves more busy than we already are is often a great fear. Setting time aside for scanning isn't easy to do in today's work environment, but if you want stronger and more robust strategy, then scanning must be a priority in your work schedule.

PART

3

Interpreting and Reporting Your Scanning

Interpreting Your Trends

You will now have a repository of trends that you and your scanning team think might be important to your organisation's future.

The next stage in your scanning process is to interpret your trends, that is, to develop some insights about those trends to test their relevance for your organisation's future. This work is best done as a group by your scanning team. Here you are assessing the relevance/usefulness strength of your trends for your organisation – what you need to pay attention to now, what you need to watch in the medium term, and what you need to monitor over the long term.

The Trend Ecosystem

At this stage, it is important to recognise three things:

- trends don't exist in isolation,
- trends are extrapolations of the past and the present, not future facts, and
- trends have uncertain future trajectories.

During this process of interpreting trends, you need to spend some time exploring how the trends might evolve over time. You should have started to do this when you scanned, and now you are looking at a number of trends to see how they connect or operate in isolation from each other. There could be weak or strong connections between trends, and some trends might collide. Wildcards and other discontinuities might intervene and derail a trend trajectory completely. For this exercise, you need to be applying system thinking principles.

The further into the future you explore, the more uncertain the trajectory of a trend is, and the more potential turning points there are. You will need to be exploring multiple alternative pathways to see whether your view that this trend is important to your organisations is robust across those alternatives.

Look, in particular, for possible pathways that might have a significant impact on how you do business today. Ask questions such as:

- what would cause a fundamental change to the way your organisation delivers its services?
- what would generate fundamental change in how your industry is organised?

Remember that you are scanning at the moment, rather than considering strategic options. You are in the *interpretation* stage of the Generic Foresight Process (Figure 2) now.

Your aim here is to identify trends that might be critical in terms of your organisation's sustainability, both those which are fairly certain in their trajectory, and those which are uncertain in terms of the exact nature of how they will have an impact on your organisation into the future. Identifying what these trends mean for your organisation, and how you might respond over time is part of the next phase of strategy development (what might happen). Right now, you are not looking for possibilities, not answers.

What is Important Now and What can Wait

The next step is to make an assessment of the likely impact of your identified trends over your scanning period. Table 3 (adapted from Shaping Tomorrow[6]) shows a framework for assessing trends to help you identify critical trends for your organisation to address now and into the future.

Your assessment covers a number of categories:

- Timeframe: *when will a mainstream impact begin to appear?*
- Scope: *how widely will the trend be accepted/adopted?*
- Impact: *how strong will the impact of this trend be?*
- Likelihood: *how quickly might this trend have an impact on the organisation?*
- Urgency: *what is the required speed of response by the organisation to the trend?*

The first three relates to the trend itself, the last two relate to the impact of the trend on the organisation.

Each category can be allocated a number to assist in making decisions about how to respond to those trends. You will need to determine the cut-off point for each of the decision categories that suits your organisation, but as a guide:

- assessments between 20-25: **act now**
- assessments between 15-19: **manage**
- assessments 14 and under: **watch**

You do not have to use this type of quantitative approach. The critical element here is that you explore implications of the trends you have identified over a longer term period. A trend that is certain today may well be very uncertain in five years time.

The process of interpreting your scanning hits for your organisation is a pivotal step in environmental scanning. This is a step where you also add your judgement and perspective to the mix, and where you add meaning in the context of your organisation's strategic focus and priorities.

Your assessment of scanning hits starts the process of developing robust strategy and action for your organisation.

---

[6] Shaping Tomorrow offers this capacity in one of its paid services. Contact Thinking Futures for more information, and saves you a lot of time if you have a lot of scanning hits. Doing this sort of assessment manually is really only feasible if you have a relatively small number of trends to work with.

Assessing Trend Relevance

Consider trend impact globally						Consider trend impact on your organisation			
Timeframe		**Scope**		**Impact**		**Likelihood**		**Urgency**	
When will trend begin to have an impact?		*What is likely future uptake of this trend?*		*What is likely future impact of this trend?*		*What is the likelihood of the trend having an impact on your organisation?*		*How quickly does your organisation need to respond to this trend?*	
Assessment	**Rating**	**Assessment**	**Rating**	**Assessment**	**Rating**	**Assessment**	**Rating**	**Assessment**	**Rating**
1-4 years	5	Global	5	Significant	5	Almost Certain	5	Now	5
5-9 years	4	Widespread	4	Major	4	Likely	4	Within 3-5 years	4
10-14 years	3	Niche sector/market	3	Moderate	3	Possible	3	6-9 years	3
15-20 years	2	Organisations	2	Minor	2	Unlikely	2	10-15 years	2
20+years	1	Individuals	1	Insignificant	1	Rare	1	16-20 years	1
Never *	0	Non-existing*	0					20+ years**	0

*Before you assign "Never" or "Non-existing" to a trend, make sure you have tested your assumptions, and identified your blind spots. Ask what would have to happen to make the trend a reality? Only then should you feel comfortable assigning these categories to a trend.

** Even though the urgency to address these trends is long-term, consider keeping them on your scanning 'watch list'.

Assessment Total	**Decision** *What might you do now?*	**Comment**
Between 20-25	**Act now**	You need to make a decision now about whether or not your organisation needs to respond to this trend. Consider how to respond and include in your current strategic plan if appropriate. If you decide not to include in your plan, then add to your watch list.
Between 15-19	**Manage**	You need to consider now how you might respond to these trends as they continue to emerge. It would be a good idea to include actions in your plan that allow you to act quickly if you need to.
14 and under	**Watch**	These trends are unlikely to have an impact on your planning in the medium term. To prevent future surprises, keep these trends on your scanning watch list.

Reporting

This section describes three types of report that can be produced to communicate the outcomes of your scanning process. How you report your outcomes will depend on what your organisation expects from your scanning, or what you know will add value to existing processes. These three forms are suggested; you will probably need to design the specifics of your own report. You can use other technologies to report as well – have a look at a Competitive Futures STEEP Report on slideshare for inspiration.

In any report that you produce, however, make sure you include a statement that makes it clear that the scanning hits and trends are not predictions. Stress this. The trend analysis you are providing is an assessment of what might be possible in the future, not what will be. It is designed to inform thinking about how the organisation might need to operate in response to increasing complexity and uncertainty in the external environment.

These reports aim to keep your scanning visible in your organisation, but to achieve this aim, you need to ensure they are relevant to your organisation and its work. The exception is the scanning hits report which really is designed to expose people to what is going on 'out there' in the external environment.

Scanning Hits

You will have been producing a weekly report on your scanning hits (See Part 2). As well as sharing this report among your planning team, you can also share it more broadly across your organisation as frequently as is appropriate.

Your scanning hits can be sent out via email (although this has the potential to annoy people whose inboxes are overflowing), or via a website that allows staff to rank the hits on relevance/importance to the organisation's strategy. The latter obviously will cost money to develop, but it allows a degree of interaction not possible with conventional email approaches. One advantage is that the website is always available and staff can check it when they have time, rather than responding to a push email.

Staff views collected in this way help identify those hits you might need to explore further, even if your own scanning is suggesting the hit might not be of major importance. This process is an effective and cost-effective way to gather staff views about the future. Be open, dismiss nothing.

These reports are part of the process of expanding our understanding of the industry and global environment – the trends that are emerging in those spaces that may or may not be directly related to your organisation's business today.

Trend Reports

Once you have done some work on initial interpretation of your scanning hits, you can prepare a quarterly trend report. This could be simply your trend summary, assessment and implications (questions) – see the template provided at the end of the guide as an example of how to prepare this report. Adapt it as needed.

This report is more focused than your scanning hits report, and has a higher relevance rating than individual scanning hits. There are many uses for such a report – for example, general interest, targeted discussion at meetings, special planning workshops or forums to address specific trends.

Strategy Reports

A third type of report can be linked directly to the strategic planning cycle. It is best produced to be a resource to organisational units to inform their thinking about what options they might pursue. This ensures that everyone in the organisation has the same information about the external environment and the trends likely to affect the way they do business into the future.

However, this more detailed report is also designed to be used as an input into more focused strategy development such as scenario planning. It provides the starting point for explorations about what might happen and what is possible and plausible – this is the ***prospection*** stage of the Generic Foresight Process.

This type of report provides a summary of the implications of the trends you have identified earlier in your scanning process. It is not so much a listing of the trends but focuses instead of the implications of those trends for your organisation – what might these trends mean for strategy now and into the future? What needs to be acted on now, and what can be monitored over time? What must not be ignored?

The exact format of the report will depend on your organisational culture and ways of operating. At the very least, you need an executive summary that identifies very clearly the critical trends your organisation needs to consider. The report could cover the summary of the trend (what is changing?), the impact and significance for you organisation, and implications and trigger questions.

In the early stages of your scanning, send the report to 'friendly' managers and seek their feedback. Amend your report as needed to provide additional information or clarifications.

You may be able to undertake a custom scan based on this feedback (ie a scan around a particular issue) that can also demonstrate the value of scanning.

Finally: Keep Going

Scanning is a continual process. For it to be of any value in strategy development, it needs to be done on an ongoing basis. It needs to be someone's job. Adapt the processes described in this guide to suit your organisation.

You are aiming to build your understanding of the external environment in ways that are broader and deeper and more meaningful to your organisation's strategy development processes.

The aim of scanning and of futures work in general is to enable organisations to be ready to respond to the challenges of the external environment, and to adjust strategy accordingly. What you are trying to avoid is the 'head in the sand' syndrome where you believe that you don't need to keep an eye on what might be coming because the future will be just like today. Expect surprises with this approach, and expect to stay reactive!

You will find that your focus on what really matters sharpens over time. You will still be under the influence of the busyness syndrome on a daily basis, but you will have clearer signposts about where to focus your energies – both as an individual and as an organisation. Your biggest challenge is likely to be finding the time to scan and to think about what you are seeing – but you must make the time. You will change the way you think, and you will be able to contribute to the development of a longer term view of your organisation's future.

References

If you are interested in reading more about environmental scanning and how it fits into strategy development, here are some resources.

Journal Articles

Choo, C.W. (1998) Information Management for the Intelligent Organisation: The Art of Scanning the Environment, ASIS Monograph Series, Medford New Jersey. Available from http://choo.fis.utoronto.ca/

Day, G and Schoemaker, P. (2005) Scanning the Periphery, Harvard Business Review, http://hbr.harvardbusiness.org/2005/11/scanning-the-periphery/ar/1. Includes assessment of need and capacity for peripheral vision.

Richard Slaughter (1999) "A new framework for environmental scanning". Foresight 1 (5): 441-451.

Joseph Voros (2001) "Reframing environmental scanning: an integral approach". Foresight 3 (6): 533-551.

Andy Hines (2003) "Applying integral futures to environmental scanning". Futures Research Quarterly 19 (4) 49-62.

Websites/Guides

UK Foresight Project Futures Toolkit http://hsctoolkit.tribalctad.co.uk/content/view/136/2/

DEFRA (Department of Food, Environment and Rural Affairs) website: http://horizonscanning.defra.gov.uk

Shaping Tomorrow's online foresight guide.

ForLearn's online foresight guide.

Institute for Alternative Futures, Wider Futures: Using Futures Tools to Better Understand and Create the Future (http://www.altfutures.com).

See also Input Methods on the Resources section on Thinking Futures website.

Need Help? Questions? Contact Thinking Futures

Maree Conway
Thinking Futures
PO Box 2118, Hotham Hill, 3051
Tel: +61 3 90169506
Skpye: mkconway1
Email: maree.conway@thinkingfutures.net

Trend Report Template

NOTE: this template is 'worked' so that you can see how hits can be recorded and assessed. You can change the template to suit the needs of your organisation and to record information relevant to you.

TREND CATEGORY: SOCIAL

Trend Title: Student Learning – any place, any time

Trend Summary

As technological developments continue to change the way we live, the way students in the future will want to learn will continue to evolve. The merging of a number of trends around the growth of consumer power has implications for how learning is delivered, and how students will want to structure their own learning experiences.

The combination of technological developments, new approaches to learning and learning delivery means that students will be able to enrol and study in a course anywhere around the world.

Some technologies currently being used by students: VOIP and mobiles, google, youtube, teachertube, Wikipedia, wikispaces, IGoogle, Flickr, Del.ic.ious, ipods, iphone.

Possible Wiildcards
Global IT crash
Computer viruses that can't be removed

Assessment					
Timeframe	**Scope**	**Impact**	**Likelihood**	**Urgency**	**Decision**
5	2	3	4	3	Act Now

Some Discussion Questions
How can teachers and academics embrace and embed technology into their curriculum to remain competitive?
How can organisations be flexible in the way they teach to attract and retain students?
How do organisations tap into global markets (eg China and India)?
How will IT departments support teachers in this environment?

Source(s)
http://www.youtube.com/watch?v=dbUivdXydhA
Educating the e-generation Part 1 of 5
http://www.youtube.com/watch?v=TQsSJOYwOCQ&feature=related
Educating the e-generation Part 2 of 5
http://www.youtube.com/watch?v=We0ddvhe1rw&feature=related
Educating the e-generation Part 3 of 5
http://www.youtube.com/watch?v=l1jdxGvRIlE&feature=related
Educating the e-generations Part 4 of 5
http://www.youtube.com/watch?v=lZmX1pkeDL4&feature=related
Educating the e-generation Part 5 of 5
shifthappens.wikispaces.com
http://www.youtube.com/watch?v=tqjnQECcRH4&feature=related
Educating trends in a fast changing world
www.teachertube.com
Teacher Tube

About Thinking Futures

Thinking Futures works with people in organisations to enhance their long term thinking capacity and to use that thinking to build stronger strategy. We work with organisations to build a long term thinking capacity by:

- building and enhancing environmental scanning to identify information and ideas needed for strategic decision making – I help you bring the outside into your organisation,

- running strategic thinking processes that start with a focus on the long term view rather than short term urgency – I use scenario learning to help you understand the shape of preferred futures, potential risks and opportunities and your emerging strategic options so that your strategy today is robust and futures ready, and

- using new approaches to develop strategic plans that inform decision making today – I work with your people to make your plans meaningful 'on the ground' in your organisation, and a key tool in your strategy execution process.

The three activities – scanning, thinking and planning – all contribute to building a strategic foresight capacity, for both you as an individual, and for your organisation. The more people in your organisation who understand the need for these three strategic capabilities, the stronger and more successful your strategy and its implementation will be.

About Maree Conway

Thinking Futures is run by Maree Conway. Maree works primarily with people in organisations ready to move beyond business-as-usual thinking to build robust and sustainable strategy for the future. Her expertise is focused around strategy development and implementation, and the use of futures approaches to strengthen strategic thinking. Maree helps people challenge their current thinking paradigms and see beyond the constraints of today to build strong futures for themselves and their organisations.

Before establishing Thinking Futures, Maree had a successful career as a tertiary education manager for almost 30 years, working in policy, planning and strategy roles in both faculties and university contexts. She has a Bachelor of Arts from Griffith University, a Masters in Educational Administration (Honours) from the University of New England, and a Graduate Diploma in Strategic Foresight from Swinburne University of Technology. Since 1999, Maree has facilitated and managed strategy projects and workshops at Swinburne University of Technology and Victoria University, and has facilitated workshops with Australian government departments and with business organisations. Maree is a regular presenter on changing the way we think about the future at conferences in Australia and internationally, and is the network administrator for the Education Foresight Network on the global Shaping Tomorrow Foresight Network.